



Docket No. 053649-0003

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Nowak et al.  
Serial No.: 09/178,329  
Filed : August 23, 1998

Examiner: M. Jackson  
Group Art No.: 1773

For: COMPOSITE WRAP MATERIAL

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**DECLARATION OF LOUANN S. MUELLER**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

I, Luann S. Mueller, declare and say as follows:

1. In 1984, I received a Bachelor of Business Administration with a minor in Pulp and Paper Science from Western Michigan University, Kalamazoo, Michigan.
2. Since September 1997, I have been employed by Coating Excellence International, Inc., as Technical Manager.
3. For the last fourteen years I have worked in the paper industry. Prior to working for Coating Excellence, I was employed by James Rivers as a Quality/Product Development Manager. In particular, I worked with waxing and extruding equipment, and the coated products resulting therefrom.
4. During my entire career, I never encountered a ream wrap product having the same construction as the present invention.

5. It would not occur to a person of ordinary skill to replace a ream-wrap paper having a coating with a ream-wrap paper having a solid extruded film adhered thereto. It is known among those of ordinary skill that coatings applied with a Meyer rod or equivalents means do not exhibit the same strength properties as extruded films. For example, the extruded films have biaxial strength properties so that the strength exhibited in the machine direction is different than that exhibited in the cross-machine direction. Conversely, coatings are isotropic so that their strength properties are independent of direction.
6. An example of one film used by applicant is AET FILMS, AQS Transparent OPP Film that is a coextruded, biaxially oriented polypropylene film. (Attached hereto are true copies of AET FILMS product information available from the AET FILM Product catalogue.) The coextruded film has a greater tensile strength in the cross-machine direction than in the machine direction. Conversely, paper has a greater tensile strength in the machine direction than cross-machine direction. By laminating these two materials together, the tensile strength in each direction is enhanced. This positively affects the burst strength of the material, as evidenced by the "Substrate Comparison" attached hereto, wherein the "SharkSkin™" product made according to the claimed invention has a higher burst strength than other ream wraps.
7. The product made according to the claimed invention is substantially free of air pockets. A person of ordinary skill in the art of packaging would understand this to mean that there are approximately less than three air pockets of about 1mm in diameter formed between the substrate and laminate in ten square feet of material.
8. The product made according to the claimed invention has fold characteristics such that when a crease is put into the material, it stays there. Paper has this characteristic. The material does not have a memory causing the fold to open, as is the case with film.

9. Burst strength is determined by standardized tests such as that defined by the American Society for Testing and Materials test, ASTM D 774, entitled "Test Method for Bursting Strength of Paper." This test can also be used to determine the burst strength of polymer materials such as polyethene terephthalate film and sheeting (ASTM D5047-95).
10. A person of ordinary skill in the art of packaging will know that a high burst strength means that by testing an appropriate sample of available ream wrap products having the same basis weight according to a standardized test such as ASTM D 774, the wrap made in accordance with the claimed invention would yield a higher burst strength.
11. The water vapor transfer rate (WVTR) as determined by a standardized test method such as TAPPI T464 om-90 for a product made in accordance with the claimed invention is less than 0.5 g/100 in<sup>2</sup>/24 hr at 100 degrees Farenheit, 90 % relative humidity.
12. I hereby declare that all statements made herein of my own knowledge are true, and that all statements are made on information and belief believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the patent application to which it relates or any patent issued thereon.

DATE: April 3, 2001

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